AMENDATORY SECTION (Amending WSR 02-03-125, filed 1/23/02, effective 3/1/02)

WAC 296-52-60015 Coverage. This chapter applies to:

✎ Any person, partnership, company, corporation, government agency, or other entity

✎ All aspects of explosives, blasting agents, and pyrotechnics including:

– Manufacture
– Sale
– Possession
– Purchase
– Use
– Storage
– Transportation
– Avalanche control

✎ Display fireworks.

Note: Class A and B display fireworks are partially exempt from the requirements of this chapter (see WAC 296-52-60020(5)).

AMENDATORY SECTION (Amending WSR 03-06-073, filed 3/4/03, effective 8/1/03)

WAC 296-52-60020 Exemptions. (1) **The following are exempt from this chapter:**

(a) Explosives or blasting agents transported by railroad, water, highway, or air under the jurisdiction of the Federal Department of Transportation (DOT), the Washington state utilities and transportation commission, and the Washington state patrol.

(b) Laboratories of schools, colleges, and similar institutions if confined to the purpose of instruction or research and if the quantity does not exceed one pound.

(c) Explosives in the forms prescribed by the official United States Pharmacopoeia.

(d) The transportation, storage, and use of explosives or blasting agents in the normal and emergency operations of:

✎ The United States agencies and departments including the regular United States military departments on military reservations

✎ Arsenals, navy yards, depots, or other establishments owned by, operated by, or on behalf of, the United States

✎ The duly authorized militia of any state

✎ The emergency operations of any state department or agency, any police, or any municipality or county

(e) A hazardous devices technician when they are carrying out:

✎ Normal and emergency operations

✎ Handling evidence

✎ Operating and maintaining a specially designed emergency response vehicle that carries no more than ten pounds of explosive materials

✎ When conducting training and whose employer possesses the minimum safety equipment prescribed by the Federal Bureau of Investigation (FBI) for hazardous devices work

Note: A hazardous devices technician is a person who is a graduate of the FBI Hazardous Devices School and who is employed by a state, county, or municipality.

(f) The importation, sale, possession, and use of fireworks, signaling devices, flares, fuses, and torpedoes.

(g) ((~~The transportation, storage, and use of explosives or blasting agents in the normal and emergency avalanche control procedures used by trained and licensed ski area operator personnel. However, the storage, transportation, and use of explosive and blasting agents for such use must meet the requirements in chapter 296-59 WAC, Safety standards for ski operations.~~

~~**Note:** The purpose of this chapter is to protect the public by enabling ski area operators to exercise appropriate avalanche control measures. The legislature finds that avalanche control is of vital importance to safety in ski areas and that the provisions of the Washington State Explosives Act contain restrictions, which do not reflect special needs for the use of explosives as a means of clearing an area of serious avalanche risks. This act recognizes these needs while providing for a system of regulations designed to make sure that the use of explosives for avalanche control conforms to fundamental safety requirements.~~))

Reserved.

(h) Any violation under this chapter if any existing ordinance of any city, municipality, or county is more stringent.

(2) **Noncommercial military explosives.** Storage, handling, and use of noncommercial military explosives are exempt from this chapter while they are under the control of the United States government or military authorities.

(3) **Import, sale, possession, or use of:**

✎ Consumer fireworks

✎ Signaling devices

✎ Flares

✎ Fuses

✎ Torpedoes

(4) **Consumer fireworks.** Fireworks classified as Division 1.4 explosives by U.S. DOT and regulated through the State fireworks law (chapter 70.77 RCW) and the fireworks administrative code (chapter 212-17 WAC) by the Washington state fire marshal.

Note: Consumer fireworks are classified as fireworks UN0336 and UN0337 by U.S. DOT (49 CFR 72.101).

(5) **Partial exemption--Division 1.1, 1.2, or 1.3 display fireworks.** Display fireworks are fireworks classified as Division 1.1, 1.2, or 1.3 explosives by US DOT. Users of Division 1.1, 1.2, or 1.3 display fireworks must comply with all storage or storage related requirements (for example, licensing, construction, and use) of this chapter.

Note: Display fireworks are classified as fireworks UN0333, UN0334, or UN0335 by U.S. DOT (49 CFR 172.101).

(6) **Conditional exemption small arms explosive materials.** Public consumers possessing and using:

- Black powder, under five pounds
- Smokeless powder, under fifty pounds
- Small arms ammunition
- Small arms ammunition primers

– Unless these materials are possessed or used illegally or for a purpose inconsistent with small arms use.

AMENDATORY SECTION (Amending WSR 05-08-110, filed 4/5/05, effective 6/1/05)

WAC 296-52-60130 Definitions. **Aerial blaster in charge** means a person who:

- Is fully qualified, by means of training and experience in explosives use
- Is adequately trained, experienced, and capable of recognizing hazardous conditions throughout the blast area
- Is in charge of:

– The blast process

– All aspects of explosives and blasting agent storage, handling, and use as recommended by the manufacturer and as required by this chapter

- Is in a position of authority:

– To take prompt corrective action in all areas of the blast operation

– Over all other blasters at the blast sight

- Has a minimum of five missions under the supervision of a licensed aerial blaster in charge
- Successfully completes a written exam for aerial blaster in charge.

Alien means any person who is not a citizen or national of the United States.

American Table of Distances means the American Table of Distances for Storage of Explosives as revised and approved by Institute of the Makers of Explosives (IME).

Approved storage facility means a facility for the storage

of explosive materials which is in compliance with the following chapter:

- Storage licensing (WAC 296-52-660)
- Storage of explosive materials (WAC 296-52-690)
- Magazine construction (WAC 296-52-700).

ATF means the Bureau of Alcohol, Tobacco, Firearms and Explosives.

((**Attend** ~~means the physical presence of an authorized person who stays in view of the explosives.~~)) **Attended, as attending explosives,** means the physical presence of an authorized person within the field of vision of explosives. The said attendant shall be awake, alert, and not engage in activities which may divert their attention so that in case of an emergency the attendant can get to the explosives quickly and without interference, except for brief periods of necessary absence, during which absence simple theft of explosives is not ordinarily possible.

Authorized, approved, or approval means authorized, approved, or approval by:

- The department
- Any other approving agency
- An individual as specified in this chapter.

Authorized agent means a person delegated by a licensed purchaser, who possesses a basic knowledge of explosives handling safety, to order and receive explosives on the purchaser's behalf.

Authorized agent list means a current list of agents the purchaser has authorized to order or receive explosives on their behalf.

Authorized person means a person approved or assigned by an employer, owner, or licensee to perform a specific type of duty or be at a specific location at the job site.

Avalanche means the sliding or falling of a large amount of snow down a steep slope which has a destructive force due to its mass.

Avalanche control pack means a specially designed and constructed pack for carrying explosives.

Avalanche control route means a route or specific path which is used by an authorized person in order to control the occurrence of avalanches.

Avalauncher means a device like a cannon which is used for avalanche control blasting. It has a rotating base calibrated for pointing and the barrel is mounted on an elevating mechanism. It uses a compressed gas to propel a projectile containing an explosive charge and detonating means. The gas source is connected to the gun by high pressure hose with in-line control valves and pressure gauges ahead of the trigger mechanism.

Barricades

✎ **Barricade** means effectively screening a building containing explosives by means of a natural or artificial barrier from a magazine, another building, a railway, or highway.

✎ **Artificial barricade** means a barricade of such height that a straight line from the top of any sidewall of the building containing explosives to the eave line of any magazine or other building or to a point twelve feet above the center of a railway or highway shall pass through such barrier, an artificial mound or properly revetted wall of earth with a minimum thickness of three feet.

✎ **Natural barricade** means any natural hill, mound, wall, or barrier composed of earth, rock, or other solid material at least three feet thick.

Blast area means the area of a blast that is effected by:

✎ Flying rock missiles

✎ Gases

✎ Concussion.

Blast pattern means the plan of the drill holes laid out and a display of the burden distance, spacing distance, and their relationship to each other.

Blast site means the area where explosive material is handled during loading and fifty feet in all directions from loaded blast holes or holes to be loaded.

Blaster means a person trained and experienced in the use of explosives and licensed by the department.

Blaster in charge means a licensed blaster who is:

✎ Fully qualified, by means of training and experience in explosives use

✎ Adequately trained, experienced, and capable of recognizing hazardous conditions throughout the blast area

✎ In charge of:

– The blast process

– All aspects of explosives and blasting agent storage, handling, and use as recommended by the manufacturer and as required by this chapter

✎ In a position of authority:

– To take prompt corrective action in all areas of the blast operation

– Over all other blasters at the blast area

Blaster's license means an individual license issued by the department under the provisions of chapter 296-52 WAC.

Blasting agent means any material or mixture consisting of a fuel and oxidizer:

✎ That is intended for blasting

✎ Not otherwise defined as an explosive

✎ If the finished product, as mixed for use or shipment,

cannot be detonated by means of a number 8 test blasting cap when unconfined

– A number 8 test blasting cap is one containing two grams of a mixture of eighty percent mercury fulminate and twenty percent potassium chlorate, or a blasting cap of equivalent strength. An equivalent strength cap comprises 0.40-0.45 grams of PETN base charge pressed in an aluminum shell with bottom thickness not to exceed 0.03 of an inch, to a specific gravity of not less than 1.4 g/cc., and primed with standard weights of primer depending on the manufacturer

Blasting cap or cap when used in connection with the subject of explosives shall mean detonator.

Blockholing means the breaking of boulders by firing a charge of explosives that has been loaded in a drill hole.

Buildings that are not inhabited means a building(s) which has no one in it while explosives are being made up in an adjacent explosives makeup room or while explosives are being held in an adjacent day box or hand charge storage facility.

Competent person means a person who:

✎ Is capable of identifying existing hazardous and the forecasting of hazards of working conditions which might be unsanitary or dangerous to personnel or property

✎ Has authorization to take prompt corrective action to eliminate such hazards.

Consumer fireworks means:

✎ Any small firework device:

– Designed to produce visible effects by combustion

– That must comply with the construction, chemical composition, and labeling regulations of the U.S. Consumer Product Safety Commission (Title 16 CFR, Parts 1500 and 1507),

✎ A small device designed to produce audible effects which include, but are not limited to:

– Whistling devices

– Ground devices containing 50 mg or less of explosive materials

– Aerial devices containing 130 mg or less of explosive materials

Note: Fused set pieces containing components, which, together, exceed 50 mg of salute powder are not included.

Conveyance means any unit used for transporting explosives or blasting agents, including, but not limited to:

✎ Trucks

✎ Trailers

✎ Rail cars

✎ Barges

✎ Vessels.

Day box means a box which:

✎ Is a temporary storage facility for storage of explosive materials

✎ Is not approved for unattended storage of explosives

✎ May be used at the worksite during working hours to store explosive materials, provided the day box is:

– Constructed as required (WAC 296-52-70065, Explosives day box)

– Marked with the word "explosives"

– Used in a manner that safely separates detonators from other explosives

– Guarded at all times against theft

Dealer means any person who purchases explosives or blasting agents for the sole purpose of resale and not for use or consumption.

Detonating cord means a round flexible cord containing a center core of high explosive and used to initiate other explosives.

Detonator means any device containing any initiating or primary explosive that is used for initiating detonation and includes, but is not limited to:

✎ Electric and electronic detonators of instantaneous and delay types

✎ Detonators for use with safety fuses, detonating cord delay connectors, and nonelectric instantaneous delay detonators which use detonating cord, shock tube, or any other replacement for electric leg wires.

Discharge hose means a hose with an electrical resistance high enough to limit the flow of stray electric currents to safe levels, but not high enough to prevent drainage of static electric charges to the ground. Hose not more than 2 megohms resistance over its entire length and of not less than 5,000 ohms per foot meets the requirement.

Display fireworks means large fireworks:

✎ Designed primarily to produce visible or audible effects by combustion, deflagration, or detonation, and include, but are not limited to:

– Salutes containing more than 2 grains (130 mg) of explosive materials

– Aerial shells containing more than 40 grams of pyrotechnic compositions

– Other display pieces, which exceed the limits of explosive materials for classification as "consumer fireworks"

– Fused set pieces containing components, which together exceed 50 mg of salute powder

Dud means an unexploded deployed charge which still has its initiation system in place.

Electric detonator means a blasting detonator designed for and capable of detonation by means of electric current.

Electric blasting circuitry consists of these items:

✎ **Bus wire.** An expendable wire used in parallel or series,

or in parallel circuits, which are connected to the leg wires of electric detonators.

✎ **Connecting wire.** An insulated expendable wire used between electric detonators and the leading wires or between the bus wire and the leading wires.

✎ **Leading wire.** An insulated wire used between the electric power source and the electric detonator circuit.

✎ **Permanent blasting wire.** A permanently mounted insulated wire used between the electric power source and the electric detonator circuit.

Electric delay detonators means detonators designed to detonate at a predetermined time after energy is applied to the ignition system.

Electronic detonator means a detonator that utilizes stored electrical energy as a means of powering an electronic timing delay element/module that provides initiation energy for firing the base charge.

Emulsion means an explosive material containing:

✎ Substantial amounts of oxidizer dissolved in water droplets, surrounded by an immiscible fuel

✎ Droplets of an immiscible fuel surrounded by water containing substantial amounts of oxidizer.

Explosives means:

✎ Any chemical compound or mechanical mixture:

– Commonly intended or used for the purpose of producing an explosion

– That contains any oxidizing and combustible units or other ingredients in proportions, quantities or packing that an ignition by fire, friction, concussion, percussion, or detonation of any part of the compound or mixture may cause sudden generation of highly heated gases resulting in gaseous pressures capable of producing destructive effects on contiguous objects or of destroying life or limb

✎ All material classified as Division 1.1, 1.2, 1.3, 1.4, 1.5, or 1.6 explosives by U.S. DOT

✎ For the purposes of public consumer use, the following are not considered explosives unless they are possessed or used for a purpose inconsistent with small arms use or other legal purposes:

– Small arms ammunition

– Small arms ammunition primers

– Smokeless powder, not exceeding fifty pounds

– Black powder, not exceeding five pounds

Explosive actuated power devices means any tool or special mechanized device, which is activated by explosives and does not include propellant actuated power devices.

Explosives classifications. Explosives classifications include, but are not limited to:

✎ Division 1.1 and Division 1.2 explosives (possess mass explosion or detonating hazard):

– Dynamite
– Nitroglycerin
– Picric acid
– Lead azide
– Fulminate of mercury
– Black powder (exceeding 5 pounds)
– Detonators (in quantities of 1,001 or more)
– Detonating primers

✎ Division 1.3 explosives (possess a minor blast hazard, a minor projection hazard, or a flammable hazard):

– Propellant explosives
– Smokeless powder (exceeding fifty pounds)

✎ Division 1.4 explosives:

– Explosives that present a minor explosion hazard
– Includes detonators that will not mass detonate in quantities of 1,000 or less

✎ Division 1.5 explosives:

– Explosives with a mass explosion hazard but are so insensitive that there is little probability of initiation
– ANFO and most other blasting agents are in this division

✎ Division 1.6 explosives:

– Explosives that are extremely insensitive and do not have a mass explosion hazard

Explosives exemption. The exemption for small arms ammunition, small arms ammunition primers, smokeless powder, not exceeding fifty pounds, and black powder, not exceeding five pounds:

✎ Applies to public consumer use only

✎ Does not apply to the employer employee relationship covered under the Washington Industrial Safety and Health Act.

Explosives international markings.

✎ The department will accept U.S. DOT and/or ATF international identification markings on explosives and/or explosives containers or packaging

✎ This exception is under the authority of RCW 70.74.020(3) and in lieu of Washington state designated markings (as defined by RCW 70.74.010(4) (Division 1.1, 1.2, and 1.3) and required by RCW 70.74.300).

Explosives manufacturing building means any building or structure, except magazines:

✎ Containing explosives where the manufacture of explosives, or any processing involving explosives, is conducted

✎ Where explosives are used as a component part or ingredient in the manufacture of any article or device.

Explosives manufacturing plant means all lands with buildings used:

✎ In connection with the manufacturing or processing of explosives

✎ For any process involving explosives

✎ For the storage of explosives

✎ To manufacture any article or device where explosives are used as a component part or ingredient in the article or device.

Fireworks means any composition or device:

✎ Designed to produce a visible or an audible effect by combustion, deflagration, or detonation

✎ Which meets the definition of "consumer fireworks" or "display fireworks."

Forbidden or not acceptable explosives means explosives which are forbidden or not acceptable for transportation by common carriers by rail freight, rail express, highway, or water in accordance with the regulations of the Federal Department of Transportation (DOT).

Fuel means a substance, which may react with oxygen to produce combustion.

Fuse (safety). See "safety fuse."

((~~**Fuse lighters** means special devices used for the purpose of igniting safety fuses.~~)) **Fuse igniter** means a special pyrotechnic device intended to be used to ignite safety fuses.

Hand charge means an explosive charge with a cap and fuse assembly inserted in place.

Handler means any individual who handles explosives or blasting agents for the purpose of transporting, moving, or assisting a licensed blaster in loading, firing, blasting, or disposal.

Note: This does not include employees of a licensed manufacturer engaged in manufacturing process, drivers of common carriers, or contract haulers.

Hand loader means any person who engages in the noncommercial assembly of small arms ammunition for personal use; specifically, any person who installs new primers, powder, and projectiles into cartridge cases.

Highway means roads, which are regularly and openly traveled by the general public and includes public streets, alleys, roads, or privately financed, constructed, or maintained roads.

Improvised device means a device, which is:

✎ Fabricated with explosives

✎ Fabricated with destructive, lethal, noxious, pyrotechnic, or incendiary chemicals, and designed, or has the capacity to disfigure, destroy, distract, and harass.

Inhabited building means:

✎ A building which is regularly occupied, in whole or in part, as a habitat for human beings

✎ Any church, schoolhouse, railroad station, store, or other building where people assemble.

Note: This does not mean any building or structure occupied in connection with the manufacture, transportation, storage, or

use of explosives.

Low explosives means explosive materials, which can be caused to deflagrate when, confined. This includes:

- Black powder, safety fuses, igniters, igniter cords, fuse lighters, and display fireworks defined as Division 1.2 or Division 1.3 explosives by U.S. DOT (49 CFR Part 173).

Note: This does not apply to bulk salutes.

Magazine means any building, structure, or container approved for storage of explosive materials.

Note: This does not apply to an explosive manufacturing building.

Manufacturer means any person engaged in the business of manufacturing explosive materials for purposes of sale or distribution or for his or her own use.

EXEMPTIONS: The following exemptions are restricted to materials and components, which are not classified (by U.S. DOT) as explosives until after they are mixed. With this restriction, the definition of manufacturer *does not* include:

- Inserting a detonator into a cast booster or a stick of high explosive product to make a primer for loading into a blast hole
- The act of mixing on the blast site, either by hand or by mechanical apparatus, binary components, ammonium nitrate, fuel oil, and/or emulsion products to create explosives for immediate down blast hole delivery.

Misfire means the complete or partial failure of an explosive charge to explode as planned.

Mudcap (also known as bulldozing and dobying) means covering the required number of cartridges that have been placed on top of a boulder with a three or four-inch layer of mud, which is free from rocks or other material that could cause a missile hazard.

No-light means the failure of a safety fuse to ignite.

Nonelectric delay detonator means a detonator with an integral delay element in conjunction with and capable of being detonated by a:

- Detonation impulse
- Signal from miniaturized detonating cord
- Shock tube.

Oxidizer means a substance that yields oxygen readily to stimulate the combustion of organic matter or other fuel.

Permanent magazines means magazines that:

- Are fastened to a foundation
- Do not exceed permanent magazine capacity limits (RCW 70.74.040)
- Are approved and licensed
- Are left unattended.

Person means any individual, firm, partnership, corporation, company, association, person or joint stock association or trustee, receiver, assignee, or personal representative of that entity.

Person responsible, for an explosives magazine, means:

- The person legally responsible for a magazine that actually uses the magazine
- The person is responsible for the proper storage, protection, and removal of explosives, and may be the owner lessee, or authorized operator.

Portable (field) magazines means magazines that are:

- Designed to be unattended
- Not permanently fastened to a foundation
- Constructed or secured to make sure they cannot be lifted, carried, or removed easily by unauthorized persons
- Limited to the capacity of explosives required for efficient blasting operation
- Approved and licensed.

Possess means the physical possession of explosives in one's hand, vehicle, magazine, or building.

Primary blasting means the blasting operation that dislodged the original rock formation from its natural location.

Primer means a unit, package, cartridge, or container of explosives inserted into or attached to a detonator or detonating cord to initiate other explosives or blasting agents.

Propellant actuated power device means any tool, special mechanized device, or gas generator system, which is actuated by a propellant and releases and directs work through a propellant charge.

Public utility transmission systems means:

- Any publicly owned systems regulated by:

– The utilities and transportation commission

– Municipalities

– Other public regulatory agencies, which include:

– Power transmission lines over 10 kV, telephone cables, or microwave transmission systems

– Buried or exposed pipelines carrying water, natural gas, petroleum, or crude oil or refined products and chemicals

Purchaser means any person who buys, accepts, or receives explosives or blasting agents.

Pyrotechnics, commonly referred to as fireworks, means any combustible or explosive compositions or manufactured articles designed and prepared for the purpose of producing audible or visible effects.

Qualified person means a person who has successfully demonstrated the ability to solve or resolve problems relating to explosives, explosives work, or explosives projects by:

- Possession of a recognized degree or certificate
- Professional standing
- Extensive knowledge, training, and experience.

Railroad means any type of railroad equipment that carries passengers for hire.

Safety fuse (for firing detonators) means a flexible cord containing an internal burning medium by which fire is conveyed at a continuous and uniform rate.

Secondary blasting means using explosives, mudcapping, or blockholing to reduce oversize material to the dimension required for handling.

Shock tube means a small diameter plastic tube:

- Used for initiating detonators
- That contains a limited amount of reactive material so energy, transmitted through the tube by means of a detonation wave, is guided through and confined within the walls of the tube.

Small arms ammunition means any shotgun, rifle, pistol, or revolver cartridge, and cartridges for propellant actuated power devices and industrial guns.

Note: This does not mean military type ammunition containing explosive bursting incendiary, tracer, spotting, or pyrotechnic projectiles.

Small arms ammunition primers means small percussion sensitive explosive charges encased in a detonator or capsule used to ignite propellant power or percussion detonators used in muzzle loaders.

Smokeless powder means solid chemicals or solid chemical mixtures that function by rapid combustion.

Special industrial explosive devices means explosive actuated power devices and propellant-actuated power devices.

Special industrial explosives materials means shaped materials and sheet forms and various other extrusions, pellets, and packages of high explosives, which include:

- Dynamite
- Trinitrotoluene (TNT)
- Pentaerythritol tetranitrate (PETN)
- Hexahydro-1, 3, 5-trinitro-s-triazine (RDX)
- Other similar compounds used for high-energy-rate forming, expanding, and shaping in metal fabrication, and for dismemberment and quick reduction of scrap metal.

Springing means the creation of a pocket in the bottom of a drill hole by the use of a moderate quantity of explosives so that larger quantities of explosives may be inserted.

Sprung hole means a drilled hole that has been enlarged by a moderate quantity of explosives to allow for larger quantities of explosives to be inserted into the drill hole.

Stemming means a suitable inert incombustible material or device used to confine or separate explosives in a drill hole or cover explosives in mudcapping.

Trailer means semi-trailers or full trailers, as defined by U.S. DOT, which are:

- Built for explosives
- Loaded with explosives
- Operated in accordance with U.S. DOT regulations.

U.S. DOT means the United States Department of Transportation.

Vehicle means any car, truck, tractor, semi-trailer, full trailer, or other conveyance used for the transportation of freight.

Water-gels or emulsion explosives. These explosives:

✎ Comprise a wide variety of materials used for blasting. Two broad classes of water-gels are those which:

– Are sensitized by material classed as an explosive, such as TNT or smokeless powder

– Contain no ingredient classified as an explosive which are sensitized with metals, such as aluminum, or other fuels

✎ Contain substantial proportions of water and high proportions of ammonium nitrate, some ammonium nitrate is in the solution in the water, and may be mixed at an explosives plant, or the blast site immediately before delivery into the drill hole.

AMENDATORY SECTION (Amending WSR 03-10-037, filed 4/30/03, effective 5/24/03)

WAC 296-52-61040 Reasons why applicants may be disqualified. (1) Licenses will not be issued for the manufacture, retail sale((,)) or purchase((, storage, or use)) of explosives to any applicant((,)) who is any of the following:

✎ ((Who)) Does not provide proof of a valid explosive license or permit issued by the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF)

✎ Under twenty-one years of age

✎ Whose license is suspended or revoked, except as provided in this section

✎ Convicted in any court of a crime punishable by imprisonment for a term exceeding one year

✎ Legally determined at the time of application to be:

– Mentally ill

– Insane

– Committed to a mental institution

– Incompetent due to any mental disability or disease at the time of application.

Note: The department will not reissue a license until competency has been legally restored.

✎ Physically ill or disabled, and cannot use explosives safely. Disqualifying disabilities may include, but are not limited to:

– Blindness

– Deafness

– Epileptic or diabetic seizures or coma.

Note: The department will not reissue a license until the applicant's physical ability is verified by a qualified physician through the appeal process (WAC 296-52-60065, Violation appeals).

✎ Who is an alien, unless:

– They are lawfully admitted for permanent residence

– They are in lawful nonimmigrant status

✎ Who has been dishonorably discharged from the United

States armed forces

✎ Who has renounced their citizenship from the United States.

(2) A user (blaster) license will not be issued if the applicant is denied a receiver or employee possessor designation by ATF.

AMENDATORY SECTION (Amending WSR 05-08-110, filed 4/5/05, effective 6/1/05)

WAC 296-52-64005 Responsibility to obtain a blaster's license. No one may conduct a blasting operation without a valid blaster's license issued by the department.

Note: A blaster's license is not required for a "hand loader."

Blaster license classifications table. The following information shows classification for blasting licenses.

✎ **Classification list assignment.** Classification list assignment is determined by the use of single or multiple series charges; and the knowledge, training, and experience required to perform the type of blasting competently and safely.

✎ **Multiple list applications.** When an applicant wants to apply for multiple classifications and the classifications desired are from two or more classification table lists:

– All classifications must be requested on the application

– Qualifying documentation for all classifications being applied for must be included in the applicant's resume (WAC 296-52-64050, Applicant information). Training and experience may fulfill qualification requirements in multiple classifications.

✎ **Request classifications not lists.** Applicants must request specific classifications (not list designations) on their blaster application. Licenses are not issued or endorsed for Classification Table lists A, B, or C.

✎ **License additions.** To add a classification to an existing license, see WAC 296-52-64085, Changes to a blaster's license classification.

License Classifications Table					
LIST A		**LIST B**		**LIST C**	
AB	Aerial Blasting	DE	Demolition	BT	Bomb Technician*
AG	Agriculture	SB	Surface Blasting*	UL	Unlimited*
AV	Avalanche Control	UB	Underground Blasting		
ED	Explosives Disposal*	UW	Underwater Blasting		
FO	Forestry*				

LE	Law Enforcement*				
IO	Industrial Ordnance				
SE	Seismographic				
TS	Transmission Systems				
WD	Well Drilling				

* Detailed classification information.

✎ **Aerial blasting.** Will require experience and passing aerial blasting test.

✎ **Bomb technician.** Disposal of bombs, illegal fireworks and explosive devices.

✎ **Explosives disposal.** Disposal of explosive materials by licensed blasters.

✎ **Forestry.** Includes logging, trail building, and tree topping.

✎ **Law enforcement.** Diversionary devices, explosive detection K-9 dog handlers, crowd control devices (stingers) ((~~and~~)) requires taking a handlers test. Tactical entry (breaching) requires taking the tactical entry test.

✎ **Surface blasting.** Includes construction, quarries, and surface mining.

✎ **Unlimited.** Includes all classifications except underground blasting and law enforcement.

AMENDATORY SECTION (Amending WSR 02-03-125, filed 1/23/02, effective 3/1/02)

WAC 296-52-64030 List A qualifications. To be considered for a blaster's license, limited to one or more List A classifications, an applicant must have a minimum of forty hours documented training accrued during the previous six years.

The training must include a minimum of one of these three requirements:

✎ Eight hours basic blaster safety classroom training and thirty-two hours classification specific field training experience under a qualified blaster

✎ Sixteen hours basic blaster safety classroom training and twenty-four hours classification specific field training experience under a qualified blaster

✎ Twelve months classification specific field training experience.

Aerial blasting classification shall require:

✎ Standard avalanche control blaster's license

✎ Experience requirement of five missions under the supervision of a licensed aerial blaster

✎ Successful completion of a written exam.

Note: Additional personnel on board with a standard avalanche control blaster's license may log each mission toward the aerial blasting endorsement experience requirement.

AMENDATORY SECTION (Amending WSR 02-03-125, filed 1/23/02, effective 3/1/02)

WAC 296-52-66050 Moving((~~, altering, or destroying~~)) a licensed magazine. ((~~Follow these requirements to move, alter, or destroy a licensed magazine:~~)) (1) When a magazine is moved((~~, altered, or destroyed, the licensee must~~)) the owner of the magazine must notify the department with:

(a) ((~~Notify the department~~)) The license number of the magazine

(b) ((~~Provide the license number of the magazine~~

~~(c) Identify the specific alterations made to the magazine~~)) The new location of the magazine

(2) A magazine may be moved on a job site within a reasonable distance from the original location stated on the application without notifying the department, provided the:

(a) New location complies with the requirements of this chapter and the Washington State Explosives Act

(b) Magazine can be quickly located for an inspection.

NEW SECTION

WAC 296-52-66053 Altering or destroying a licensed magazine. (1) When a magazine is altered, the licensee must notify the department with:

✎ The license number of the magazine.

✎ The specific alterations made to the magazine.

(2) When a magazine is destroyed, the licensee must notify the department with the license number of the magazine.

NEW SECTION

WAC 296-52-66057 Transfer, sale or lease of a magazine or mobile storage site. (1) When a magazine or mobile storage site is leased, the owner of the magazine or mobile storage site must notify the department with:

(a) The magazine license number or site license number

(b) The name of the individual or company leasing the magazine or mobile storage site

(2) When a magazine or mobile storage site is transferred or sold from one entity to another, the previous owner/licensee shall notify the department with:

(a) The magazine license number or site license number

(b) The date of the sale or transfer

(c) The name of the individual or company to whom the magazine or mobile storage site was sold or transferred to

(d) Who will be licensing the magazine or mobile storage site

(e) The name of the contact person and phone number.

(3) A new owner/licensee of a magazine or mobile storage site:

(a) Is responsible for the safe operation of the magazine or mobile storage site

(b) They must also:

- Submit a magazine storage application to the department
- Pay the license fee for a minimum of one year
- Obtain a storage license prior to storing explosive materials in the magazine or at the mobile storage site

AMENDATORY SECTION (Amending WSR 02-03-125, filed 1/23/02, effective 3/1/02)

WAC 296-52-67090 Initiation systems. (1) **General initiation rules.**

(a) **Training and supervision.**

(i) The blaster in charge must provide adequate on-the-job training and supervision in the safe use of initiation systems.

(ii) All members of the blasting crew must be instructed, by the blaster in charge, in the safe use of the initiation system to be used and its system components.

(b) **Manufacturer recommendations.** All initiation systems

and system components must be used in accordance with manufacturer recommendations and instructions.

(c) **Vehicle use precautions.**

(i) Explosives bulk trucks or other vehicles operated on a blast site cannot tread on:

(A) Tubing

(B) Connectors

OR

(C) Any surface delay component

(ii) If a vehicle must pass over loaded blast holes. Precautions must be made to consolidate tubing, connectors, or any surface delay component at the collar of the hole to prevent vehicle contact.

(d) **Connecting the firing line.** Firing lines cannot be connected to the blast initiating device until all personnel are:

(i) Accounted for

(ii) Removed from the blast danger area

OR

Are in a blast shelter or other location that provides equivalent protection

(e) **Visual inspection.** The blaster in charge must visually inspect the initiation system to make sure it is assembled according to the manufacturer's recommendations, before firing the shot.

(f) **Explosives not used:**

(i) Unused detonators or short capped fuses cannot be placed in holes that may be used for blasting.

(ii) Unused detonators must be removed from the work area and disposed of or stored in a licensed magazine.

(iii) Loose cartridges of explosives, detonators, primers, and capped fuses that are not used by the end of the work shift must be returned to and locked in their magazines.

(2) **Nonelectric initiation systems.**

(a) **Shock tube lines.** When a nonelectric shock tube initiation system is used:

(i) Spools of shock tube lines cannot be spooled from trucks or equipment.

(ii) The shock tube line must:

(A) Be free of knots and tight kinks

(B) Be free of cuts or abrasions that could expose the core to moisture

(C) Not be stretched

(D) Be neat and orderly

(iii) Tie ins must be kept neat and clean.

(iv) Unused lead line must be sealed to prevent moisture and dirt from entering the tube.

(v) Care must be taken to avoid hitting the tube with a shovel when the shock tube is being covered.

(vi) The end of the detonator must be pointed toward the front of the shot to minimize the chance of shrapnel flying to the rear of the blast where the shock tube will be lit.

(b) **Surface connector blocks.** Nonelectrical tubes must:

(i) Be secured properly in surface connector blocks.

(ii) Never exceed the rated capacity of tubes in surface connector blocks.

(c) **Splicing line.** A knot must be tied in the tubes to take the strain off of the splice.

(d) **Detonator cord.** If a detonator cord is used for surface tie in:

(i) All lines must be kept taut.

(ii) Connections to nonelectrical units must be at ninety degree angles.

(e) **Equipment and personnel.**

(i) Equipment cannot roll over shock tubes.

(ii) All unnecessary equipment and personnel must be removed from the blast area during loading.

(3) **Electric initiating systems.**

(a) **Survey of extraneous currents.** A survey to evaluate extraneous currents must be conducted:

(i) By the blaster in charge before adopting any system of electrical firing.

(ii) To eliminate all currents before holes are loaded.

(b) **Detonator compatibility, style, function, and manufacture.** In any single blast using electric detonators, all detonators must be:

(i) Compatible with each other.

(ii) Of the same style or function.

(iii) From the same manufacturer.

(c) **Wire capacity and gauge.**

(i) Connecting wires and lead wires must:

(A) Be insulated single solid wires with sufficient current carrying capacity

(B) Not be less than twenty gauge (American wire gauge) solid core insulated wire

(ii) Firing line or lead wires must:

(A) Be made of solid single wires with sufficient current carrying capacity

(B) Not be less than fourteen gauge (American wire gauge) solid core insulated wire

Note: Bus wires, depends on the size of the blast, fourteen gauge (American wire gauge) copper is recommended.

(d) **Lead wires.**

(i) **Shunting.** You must shunt the ends of lead wires that will be connected to a firing device by twisting them together before they are connected to leg or connecting wires.

(ii) **Control.** The blaster in charge must keep control of shunted lead wires until loading is completed and the leg wires are attached.

(iii) **Attachment.** Lead wires must be attached by the blaster in charge when it is time to fire the shot.

(e) **Detonator leg wires.** Electric detonator leg wires must:

(i) Be kept shunted (short circuited) until they are connected into the circuit for firing.

(ii) Not be separated (except for testing) until all holes are loaded and the loader is ready to connect the leg wires to the connecting or lead wires.

(f) **Circuits.**

(i) Blasting circuits or power circuits must be used in electric blasting and according to the electric detonator manufacturer's recommendations.

(ii) Care must be taken to make sure an adequate quantity of delivered current is available according to the manufacturer's recommendations, when firing a circuit of electric detonators.

(iii) A power circuit used for firing electric detonators cannot be grounded.

(iv) The firing switch must be designed so the firing lines to the detonator circuit automatically short circuit when the switch is in the "off" position.

(v) The firing switch must be locked in the "open" or "off" position at all times, except when firing from a power circuit.

(g) **Firing line insulation.** The insulation on all firing lines must be adequate and in good condition when firing electrically.

(h) **Testing.**

(i) The firing line must be checked at the terminals with an approved testing device before being connected to the blasting machine or other power sources.

(ii) The circuit, including all detonators, must be tested with an approved testing device before being connected to the firing line.

(i) **Switch keys.** The blaster in charge is the only person who is allowed to have firing switch keys in their possession.

(j) **Blasting machines.** A nonelectric system must be used if these requirements cannot be satisfied:

(i) Blasting machines must be in good condition.

(ii) The efficiency of the blasting machine must be tested periodically to make sure it delivers power at its rated capacity.

(iii) **Responsible person.**

✎ The blaster in charge must be in charge of blasting machines

✎ The blaster in charge must connect the lead wires to the blasting machine and must fire the shot

(iv) **Connections.**

✎ When firing with blasting machines, connections must be

made according to the manufacturer of the electric detonator's recommendations

- All connections must be made from the drill hole back to the source of the firing current
- Lead wires must remain shunted and not connected to the blasting machine or other source of current until the charge is ready to fire
- The number of electric detonators connected to a blasting machine cannot exceed the blasting machine's rated capacity

(v) **Series circuit.** In primary blasting, a series circuit cannot contain more detonators than the manufacturer's recommended limits for electric detonators.

(vi) **Circuit testing.** A blaster in charge must use blasting testers specifically designed to test circuits to charged holes.

(vii) **Blasting near power lines.** Whenever lead or blasting wires could be thrown over live overhead powerlines, communication lines, utility services, or other services or structures by the force of an explosion, care must be taken to make sure:

(A) The total length of wires are short enough so they will not hit the lines

(B) The wires are securely anchored to the ground

(C) The owners or operators of the utilities ((~~blasting~~)) in the blast area are notified

(viii) **Disconnecting lead wires.** After firing an electric blast from a blasting machine, lead wires must be immediately disconnected from the machine and short-circuited.

AMENDATORY SECTION (Amending WSR 02-03-125, filed 1/23/02, effective 3/1/02)

WAC 296-52-68025 Transportation of workers. Only ((~~the driver and two additional people are~~)) authorized personnel properly trained in the safe handling of explosives will be allowed in vehicles transporting explosives, provided seat belts are available for all occupants. ((~~Explosives cannot be carried when additional workers are being transported.~~))

AMENDATORY SECTION (Amending WSR 05-08-110, filed 4/5/05, effective 6/1/05)

WAC 296-52-70010 Building construction for Type 1 magazines. All building-type storage facilities must:

✎ Be constructed of masonry, wood, metal, or a combination of these materials

✎ Have no openings except for entrances and ventilation

✎ Have the ground around the facility slope away for drainage

(1) **Wall construction.**

(a) **Masonry wall construction.** Masonry wall construction must:

✎ Consist of brick, concrete, tile, cement block, or cinder block

✎ Be at least eight inches thick

(b) **Hollow masonry construction.** Hollow masonry construction must:

✎ Have all hollow spaces filled with well tamped coarse dry sand

OR

✎ Have weak concrete (a mixture of one part cement to eight parts sand with enough water to dampen the mixture) while tamping in place

AND

✎ Have interior walls covered with a nonsparking material

(c) **Fabricated metal wall construction.**

✎ Metal wall construction must be securely fastened to a metal framework and consist of one of the following types of metal:

– Sectional sheets of steel (at least number 14 gauge)

OR

– Aluminum (at least number 14 gauge)

✎ Metal wall construction must:

– Be lined with brick, solid cement blocks, and hardwood at least four inches thick or material of equivalent strength

– Have a minimum of six-inch sand fill between interior and exterior walls

– Have interior walls constructed of or covered with a nonsparking material

(d) **Wood frame wall construction.**

✎ Exterior wood walls must be covered with iron or aluminum at least number 26 gauge

✎ Inner walls, made of nonsparking materials must be

constructed with a space:

– A minimum of six inches between the outer and inner walls

AND

– Filled with coarse dry sand or weak concrete

(2) **Floors.** Floors must be:

(a) Constructed of a nonsparking material.

(b) Strong enough to hold the weight of the maximum quantity to be stored.

(3) **Foundation.**

✎ Foundations must be constructed of brick, concrete, cement block, stone, or wood posts

✎ If piers or posts are used instead of a continuous foundation, the space under the building must be enclosed with metal

(4) **Roof.**

(a) Roofs must be covered with no less than number 26 gauge iron or aluminum fastened to a 7/8-inch sheathing, except for buildings with fabricated metal roofs.

(b) If it is possible for a bullet to be fired directly through the roof at such an angle that it would strike a point below the top of the inner walls, storage facilities must be protected by one of the following two methods:

✎ A sand tray must be:

– Located at the top of the inner wall covering the entire ceiling area, except the area necessary for ventilation.

– Lined with a layer of building paper.

– Filled with at least four inches of coarse dry sand.

✎ A fabricated metal roof must be constructed of 3/16-inch plate steel lined with four inches of hardwood or material of equivalent strength. For each additional 1/16-inch of plate steel, the hardwood or material of equivalent strength lining may be decreased one inch.

(5) **Doors and hinges.**

(a) All doors must be constructed of 1/4-inch plate steel and lined with ((~~two~~)) three inches of hardwood or material of equivalent strength.

(b) Hinges and hasps must be installed so they cannot be removed when the doors are closed and locked by:

✎ Welding

✎ Riveting

OR

✎ Bolting nuts on the inside of the door

(6) **Locks.**

(a) Each door must be equipped with:

✎ Two mortise locks

✎ Two padlocks fastened in separate hasps and staples

✎ A combination of a mortise lock and a padlock

✎ A mortise lock that requires two keys to open

OR

✎ A three-point lock

(b) Padlocks must:

✎ Have a minimum of five tumblers

✎ Have a case hardened shackle at least 3/8 inches in diameter

✎ Be protected with a minimum of 1/4-inch steel hoods, constructed to prevent sawing or lever action on the locks, hasps, and staples

Note: These requirements do not apply to magazine doors that are adequately secured on the inside by means of a bolt, lock, or bar that cannot be operated from the outside.

(7) **Ventilation.**

✎ A two-inch air space must be left around ceilings and the perimeter of floors, except in doorways

✎ Foundation ventilators must be at least four inches by six inches

✎ Vents in the foundation, roof, or gables must be screened and offset

(8) **Exposed metal.**

✎ Sparking metal construction cannot be exposed below the tops of walls in storage facilities

✎ All nails must be blind nailed, countersunk, or nonsparking.

AMENDATORY SECTION (Amending WSR 05-08-110, filed 4/5/05, effective 6/1/05)

WAC 296-52-70045 Type 4 magazines: Blasting agent, low explosive, or ((~~electric~~)) nonmass detonating detonator storage facilities. A Type 4 storage facility must:

✎ Be a building, an igloo, an army-type structure, a tunnel, a dugout, a box, a trailer, semi-trailer, or other mobile facility

✎ Be fire resistant, weather resistant, and theft resistant

✎ Have the ground around the facility slope away for drainage

✎ Have the wheels removed or effectively immobilized by kingpin locking devices or other methods approved by the department, when an unattended vehicular magazine is used.

Note: Test results show that electric detonators are not affected by sympathetic detonation. Therefore, a Type 4 storage facility meets the necessary requirements for storage of electric detonators.

PART H
AVALANCHE CONTROL

NEW SECTION

WAC 296-52-800 Avalanche control. (1) General.

(a) During periods of high avalanche danger, areas in avalanche paths shall not be opened for use until trained personnel have evaluated conditions and determined whether avalanche control work is necessary.

(b) When avalanche control work is deemed necessary, areas in the potential avalanche path shall be closed until the risk of avalanches has been reduced to a level determined appropriate by trained personnel.

(c) An avalanche shall not be purposely released until the avalanche path and potential runout zone are clear of personnel and vehicles.

(d) Avalanche guards, signs, and/or barricades shall be positioned at normal entrances to the avalanche path if there is any chance that personnel and vehicles will enter the danger zone during intentional release activities.

(e) During very unstable snow conditions, release of one avalanche may trigger sympathetic releases over a wide area. Avalanche workers shall consider such possibility and clear the appropriate areas of personnel and vehicles.

(2) Personnel and equipment.

(a) The avalanche control crew shall be adequately trained and physically capable for tasks which can be anticipated in their individual job assignments.

(b) No person shall accept or be given a job assignment which is beyond the individual's physical ability or training.

(c) On-slope assignments which include potential exposure to avalanche hazards shall only be conducted by fully qualified and fully equipped control crew members.

(d) The control crew may be split up into smaller groups (teams) to work on multiple areas simultaneously provided that each team consists of at least two qualified members.

(e) Each avalanche control crew or team shall have one or more designated rescue coordinators as is deemed necessary to maintain communications. Compliance with this requirement may be achieved by designating control crew teams to serve as each

others' rescue coordinator provided that the teams are reasonably proximate to each other and do in fact maintain frequent communications.

(f) Each avalanche control crew member shall be equipped for continuous two-way communications to the avalanche crew coordinators.

(g) The avalanche crew or teams shall not be assigned to on-slope areas where they cannot maintain communications with their designated coordinator. This requirement may be met by the use of a relay person; however, if any team completely loses communications, they shall return directly to base via the safest route available.

(h) Each person on an avalanche control team shall be equipped with a shovel and an electronic transceiver before commencing on-slope control work. The transceiver shall be in the transmit position whenever personnel are performing on-slope job assignments.

(3) Avalanche rescue plan. All employers with avalanche control personnel shall have a written avalanche rescue plan. The plan shall require:

(a) All rescue personnel who will be assigned to on-slope activities shall:

(i) Be competent skiers;

(ii) Have a current first-aid card;

(iii) Be thoroughly trained in the rescue plan details;

(b) A specific list of required equipment for rescue crew personnel including:

(i) Probes;

(ii) Belaying rope;

(iii) Shovels;

(iv) Two-way communication radios;

(v) Electronic transceivers;

(c) A list of rescue equipment locations;

(d) Specific rescue procedures to be followed.

NEW SECTION

WAC 296-52-802 Acceptable warning signs for typical avalanche control devices (duds).

DANGER

EXPLOSIVES ON THE MOUNTAIN

Unexploded warheads, projectiles, or hand charges used in avalanche control may be found in target areas or in avalanche runout zones.

UNEXPLODED WARHEADS
WARHEAD MAY BE DISTORTED
FROM IMPACT.

((~~AVALANCHER~~)) AVALAUNCHER PROJECTILE
RED OPAQUE BODY,
RED TRANSLUCENT FINS.

DYNAMITE HANDCHARGE
((~~BROWN COLOR~~)) COLORED WRAPPING,
WILL USUALLY HAVE FUSE.

If you find an unexploded (dud) charge, do the following:
1. Do not disturb or touch!
2. Mark the location within 5 to 10 feet.
3. Immediately report the location.

NEW SECTION

WAC 296-52-803 Storage, makeup, and use of explosives for avalanche control blasting. (1) General.

(a) The storage, handling, and use of explosives and blasting agents used in avalanche control practices shall comply with this chapter and chapter 70.74 RCW.

(b) The minimum requirements published in chapter 296-52

WAC, Part H, shall be applicable to the storage, handling, and use of explosives and blasting agents in the endeavor of avalanche control.

(2) Management responsibility.

(a) Explosives and blasting agents shall not be stored in any regularly occupied areas or buildings except in compliance with this chapter.

(b) Explosives and blasting agents shall not be assembled or combined to form armed charges in any regularly occupied area or building except in compliance with this chapter.

(3) Personnel.

(a) Only fully qualified and licensed blasters shall be permitted to assemble or arm explosives components.

(b) Training shall include avalanche blasting experience so that the problems encountered in cold weather blasting are known factors.

(c) All training activities shall be conducted under the attended supervision of a fully qualified and licensed blaster.

(4) General requirements.

(a) Initiating systems for hand-placed or hand-thrown charges.

(i) The ignition system on single-unit hand-thrown charges shall consist of a nonelectric cap or shock tube and approved initiation system.

(ii) Multiple units combined to form a single hand-placed charge may use the above system, an approved detonating cord system or shock tube system. No other ignition system shall be permissible without specific approval by the department.

(iii) When using a shock tube system, after all charges are in place, connected to the shock tube trunk line and ready for initiation, the shock tube initiation tool shall be attached for firing.

(b) Multiple charge blasts.

(i) Detonating cord or shock tube system shall be used in lieu of blasting wire to connect multiple charge blasts.

(ii) When using detonating cord systems, after all charges are placed, connected to the detonating cord, and the charges are ready to be ignited, a safety fuse and cap shall be attached to the detonating cord. A fuse igniter may then be attached to ignite the safety fuse.

(c) Blasting caps shall be no larger than No. 8 except when recommended by the explosives manufacturer for a particular explosive used within a specific application.

(d) Electric blasting caps are not permitted.

(e) Safety fuse and shock tube.

(i) Only the highest quality safety fuse with excellent water resistance and flexibility shall be used.

(ii) Shock tube systems may be used in place of fuse cap and safety fuse systems.

(f) Fuse length.

(i) Safety fuse length shall be selected to permit the control team adequate escapement time from the blast area under all reasonable contingencies (falls, release of bindings, etc.)

(ii) In no instance shall a fuse length with less than ninety seconds burn time be permitted.

(iii) The burn time of each roll of safety fuse shall be checked prior to use.

(iv) Checked rolls shall be marked with the tested burn time.

(v) It is recommended that all hand charges be prepared for ignition with either one safety fuse and igniter or a double safety fuse and igniters.

Note: Standard safety fuse burns at a rate of forty to fifty-five seconds at two thousand five hundred meters elevation. This rate equates to approximately twenty-four inches fuse length for ninety second hand charge fuses at normal avalanche control elevations, but fuse burn rate should be checked before each use.

(5) Explosives.

(a) Explosives chosen shall have a safe shelf life of at least one operating season in the storage facilities in which it will be stored.

(b) Explosives chosen shall have excellent water and freezing resistance.

(c) Industrial primers (or boosters) that consist mainly of TNT or gelatin are the recommended explosives.

(6) Transporting explosives and hand charges.

(a) Hand charges or explosives components shall be transported in approved type avalanche control packs, in United States Department of Transportation-approved shipping containers or in licensed magazines.

(b) Criteria for avalanche control packs.

(i) The pack shall be constructed of water resistant material.

(ii) Packs shall be constructed with sufficient individual compartments to separate hand charges or explosives components from tools or other equipment or supplies which may be carried in the pack.

(iii) Each compartment used for hand charges or explosives components shall have an independent closure means.

(iv) If fuse igniters will be permitted to be carried on the avalanche control pack, a separate compartment with individual closure means shall be attached to the outside of the exterior of the pack.

(c) Use of avalanche control packs.

(i) Packs shall be inspected daily, prior to loading, for holes or faulty compartment closures. Defective packs shall not be used until adequately repaired.

(ii) Tools or other materials shall not be placed in any compartment which contains hand charges or explosives components.

(iii) Fuse igniters shall never be placed anywhere inside

the pack when the pack contains hand charges or other explosives components.

(iv) Fuse igniters may be carried in a separate compartment attached to the outside of the pack exterior but preferably in a compartment attached to the front of the carrying harness. Another acceptable alternative is to carry the igniters in a jacket pocket completely separate from the pack.

(v) Hand charges or explosives components shall not be stored or left unattended in avalanche control packs. Unused hand charges shall be promptly disassembled at the end of individual control routes and all components returned to approved storage.

(vi) Individual control team members shall not carry more than thirty-five pounds of hand charges in avalanche control packs.

(vii) A hand charge or cap and fuse assembly which has a fuse igniter attached shall never be placed in an avalanche control pack for any reason.

(d) Whenever explosives or explosives components are transported in or on any vehicle powered by an internal combustion engine, provisions shall be made to ensure that said explosives or containers cannot come into contact with the hot exhaust system.

(e) Hand charges or explosives components shall not be transported in spark-producing metal containers.

(f) Hand charges shall not be transported on public roads and highways when such roads or highways are open to the public. Explosives components shall only be transported on public roads or highways in compliance with United States Department of Transportation regulations.

NEW SECTION

WAC 296-52-805 Hand charge makeup methods. General. The department shall recognize two permissible methods concerning hand charges for avalanche control blasting. The descriptions and requirements for each method are contained in this section.

Note: A well-designed and constructed hand charge makeup room can enhance the correct assembly of explosive components and reduce the incidences of misfires from incorrect makeup or moisture.

(1) Method I. Makeup at the blast site.

(a) The ignition system shall consist of a nonelectrical blasting cap and highest quality water resistant safety fuse, or detonating cord, assembled as recommended by the manufacturer.

(b) Detonating cord shall be used to connect separated multiple-charge blasts.

(c) No other ignition system shall be permissible on hand-

placed or hand-thrown avalanche control charges unless variance is granted by the department.

(d) Caps shall be installed on correct length fuses prior to being transported out onto control routes.

(e) Caps shall only be crimped with a crimper tool approved for that purpose.

(f) Assembling caps and fuses shall be done in a warm, dry, well-lighted environment. The location used for assembly shall not have flammable fuels, flammable gases, or explosives present where accidental detonation of the caps could create a secondary ignition or detonation hazard.

(g) Each cap shall be protected by a styrofoam shield or the equivalent before being placed in an avalanche control pack for transportation.

(h) A fuse igniter shall never be attached to a fuse until the fuse and cap assembly is installed in the hand charge at the blast site and the control crew is fully prepared to ignite the charge.

(i) All 1.1 explosives shall be attended as defined in this chapter at all times when the explosive is out of the Type 1 or 2 storage magazine.

(j) Disbursement of explosive charges from the Type 1 or 2 storage magazine into avalanche control packs shall be done outside the storage magazine. Records shall be maintained for all explosives disbursed.

(k) Caps, cap and fuse assemblies, armed hand charges, or fuse igniters shall not be carried into or stored in a Type 1 or 2 magazine which contains 1.1 explosives.

(2) Method II. Hand charge makeup room. This method is different from method I primarily in that the fuse and cap assembly is installed in the explosive charge while inside a special makeup room. The assembly procedure shall be as follows:

(a) Install caps on correct length fuses with an approved crimper tool before explosives are brought into the makeup room.

(b) The cap and fuse assemblies shall not be combined with explosives to form hand charges until just before the intended time of distribution.

(c) Only nonsparking skewers shall be used to punch holes in an explosives cartridge.

(d) The fuse shall be laced or taped in position after inserting the cap in the charge.

(e) Each hand charge shall be placed in an explosives box or avalanche control pack immediately after assembly is completed.

(f) No spark-producing metal tools shall be used to open explosives containers.

(g) Fuse igniters shall never be attached to a fuse or a hand charge until the hand charge is at the blast site and the

control crew is fully prepared to ignite the charge.

(3) Makeup room requirements, procedures.

(a) Construction requirements.

(i) Makeup rooms located in accordance with the American Standard Quantity and Distance Tables for storage shall not require construction of reinforced concrete walls, floors, and doors. All other requirements of this chapter shall be applicable for such facilities.

(ii) Floors and walls. The floor and walls shall be constructed of reinforced concrete not less than eight inches thick. The rebar shall be not less than one-half inch diameter and shall be spaced on twelve-inch vertical and horizontal centers. The rebar shall be bent at a ninety degree angle and extend a minimum of twenty-four inches into the adjoining floor or wall to secure each floor and wall joint.

(iii) Roof. The roof is not limited to specific materials but shall provide both weather protection and standard snow loading protection for the region.

(iv) Access door(s).

(A) If a hinged door mounting is utilized, the hinge shall be mounted on the inside so that the door opens into the makeup room. In the fully closed position, in position to be locked, the door shall be a minimum of two inches larger than the access opening on all sides.

(B) If a flush door mounting is utilized, the door shall be mounted with a two-inch decreasing taper on all sides of both the door and the concrete access opening to form a wedge seal.

(C) If a sliding door mounting is utilized, the mounting apparatus shall be on the inside of the makeup room and the door shall be a minimum of two inches larger than the access opening when the door is fully closed.

(D) Makeup room door may be either:

(I) Constructed to the same structural integrity and mounting requirements of (A) through (C) of this subsection; or

(II) Constructed of plywood not less than two inches thick and overlaid on the outside with a steel plate not less than one-eighth inch thick.

(III) If a door which complies with (II) of this subsection is used, a berm or barricade shall be installed within six feet of the door. The berm or barricade shall extend at least as high as the top of the door and shall be a minimum of two feet wider than the door on both sides of the door.

(E) For security purposes, one steel padlock having at least five tumblers and a case hardened shackle of at least three-eighths inch diameter is sufficient for locking purposes. Hinges and hasps shall be attached so that they cannot be removed from the outside when in the closed position and with the lock in place.

(v) Interior finish. The inside of all makeup rooms shall

be finished and equipped to the following minimum requirements:

(A) Construction shall be fire resistant and nonsparking up to the top of the walls. Nails or screws shall be countersunk, blind nailed, or covered.

(B) Lighting shall be by N.E.C. explosion-proof rated fixtures and all wiring shall be in sealed conduit.

(C) Control switches shall be outside the makeup room.

(D) No electrical outlet boxes are permissible inside the room.

(b) Restrictions.

(i) Smoking, matches, open flames, or flame- or spark-producing devices shall not be permitted inside the makeup room.

(ii) Flammable liquids or flammable compressed gases shall not be stored in the makeup room.

(iii) Signs limiting entry to authorized personnel shall be posted on the door(s).

(iv) A sign stating the occupancy rules shall be posted inside the makeup room where it is clearly legible upon entering the room. The sign shall post the following rules:

(A) Occupancy shall be restricted to specifically authorized personnel;

(B) Smoking, matches, flame- or spark-producing devices, tools or equipment shall not be permitted in the room at any time when explosives or explosive components are present; and

(C) Flammable fuels or compressed gases shall not be permitted inside the room nor stored within fifty feet of the room.

(v) Heating units shall be limited to:

(A) Forced air systems with the heating unit located outside the room.

(B) Steam systems of 15 psig or less.

(C) Hot water systems of 130☜F or less.

(D) The radiant heating coils and piping for steam or hot water systems shall be protected so that explosives cannot come into contact with them.

(E) Heating ducts shall be installed so that the hot air does not discharge directly on explosives.

(F) The heating system used in a makeup room shall have controls which prevent the ambient room temperature from exceeding 130☜F.

(vi) The makeup room shall be equipped with a portable fire extinguisher of at least 2A-20BC rating.

Note: For additional requirements relating to portable fire extinguishers see WAC 296-800-300.

(vii) Ventilation.

(A) The makeup room shall be equipped with a ventilation system capable of maintaining a minimum rate of three air exchanges per hour during all times when explosives are present in the room.

(B) Fans and controls shall be located outside the makeup

room and shall be of a type approved for this service.

(C) The lighting circuit control shall also activate the ventilation fan and the ventilation fan shall be operated whenever personnel are in the room.

(D) Exhaust ventilation shall be arranged to discharge into outside air, not into an enclosed structure.

(viii) The floor or exterior walls may be constructed with duct openings for heating and ventilation purposes provided that:

(A) Each duct opening is not greater in volume than seventy-two square inches;

(B) The combined number of duct openings shall not exceed three;

(C) Duct openings shall be located within twelve inches of the floor or ceiling;

(D) The exhaust duct opening shall not be located on the wall above the makeup workbench.

(c) Practices and procedures.

(i) When explosives are present in the makeup room, entry into the makeup room shall be restricted to trained and authorized personnel.

(ii) The access door(s) to the makeup room shall be kept locked or bolted from the inside while employees are assembling explosives.

(iii) The entire makeup room shall be kept clean, orderly, and free of burnable rubbish.

(iv) Brooms and other cleaning utensils shall not have any spark-producing metal parts if used when explosives are present.

(v) Sweepings and empty explosives containers shall be disposed of as recommended by the explosives supplier.

(vi) Repair activities which utilize spark-producing tools shall not be conducted on any part of the makeup room while explosives are present.

(d) Storage of explosives.

(i) A makeup room shall not be used for the unattended storage of 1.1 explosives.

(ii) A makeup room which meets all requirements of this chapter may contain a Type 3 storage facility, for one thousand or less blasting caps.

(iii) A Type 3 storage facility shall be constructed according to the requirements in WAC 296-52-70030 through 296-52-70040.

(A) A Type 3 storage facility shall be fire resistant and theft resistant. It does not need to be bullet resistant and weather resistant if the locked makeup room provides protection from weather and bullet penetration.

(B) Sides, bottoms, and covers shall be constructed of not less than number twelve gauge metal and lined with a nonsparking material.

(C) Hinges and hasps shall be attached so that they cannot be removed from the outside.

(D) One steel padlock having at least five tumblers and a case-hardened shackle of at least three-eighths inch diameter is sufficient for locking purposes. The lock and hasp is not required to be equipped with a steel hood.

(e) Location.

(i) The makeup room shall be located in accordance with the American Quantity and Distance Separation Tables as adopted in chapter 70.74 RCW, Washington State Explosives Act and this chapter except under conditions as indicated in this section.

(ii) Where locating the makeup room in accordance with the quantity and distance separation table is impractical because of bad weather accessibility, rough terrain, or space availability:

(A) Upon application the department will issue a variance enabling location of the makeup room, by mutual agreement, at the safest possible location within the limitation of the individual base area.

(B) The safest possible location will be the location most isolated from assembly areas and buildings that are inhabited with application of additional protection measures such as:

(I) Berming.

(II) Locating natural obstructions or buildings that are not inhabited between the makeup room and assembly areas and buildings that are inhabited.

(III) Limitations on the total quantity of explosives in the makeup room at any one time.

(iii) Makeup rooms designed to hold the boxes of explosives awaiting makeup and the madeup explosives in avalanche control packs awaiting distribution may be located using the total quantity of explosives allowed at the makeup table at any one time as the referenced quantity of explosives provided.

(A) The makeup room is located in accordance with the American Quantity and Distance Separation Tables as adopted in chapter 70.74 RCW, Washington State Explosives Act and this chapter for the referenced quantity of explosives at the makeup table.

(I) This separation shall apply only to human proximity to the makeup room and only at such time as there are explosives in the makeup room.

(II) When the makeup room does not contain explosives the separation tables shall not apply.

(B) The concrete walls of the room are designed to withstand the explosion of the total amount of the referenced explosives.

(I) The concrete walls must be constructed in accordance with specifications designed and certified by a licensed engineer; or

(II) The concrete walls must be constructed to the

specifications of Department of the Army TM5-1300 "Structures to Resist the Effects of Accidental Explosions" designed to produce walls which will withstand explosion of the referenced quantity explosives.

(C) The boxes of explosives awaiting makeup and the madeup explosives in avalanche control packs awaiting distribution are located behind separate concrete debris barrier walls which will ensure that detonation of these explosives will not occur if the explosives at the makeup table detonate.

(I) The concrete debris barrier wall must be constructed in accordance with specifications designed and certified by a licensed engineer; or

(II) The concrete debris barrier wall must be constructed to the specifications of Department of the Army TM5-1300 "Structures to Resist the Effects of Accidental Explosions" to produce a barrier which will not allow detonation of the explosives awaiting makeup and distribution should the referenced quantity of explosives detonate.

(III) Access from the makeup table to the area behind the concrete debris barrier walls shall not be doored. The concrete debris barrier walls will be designed so that the access way from the makeup table to the area behind the concrete debris barrier wall will deflect debris from an explosive blast by inherent design.

(D) The roof shall be designed so that the resistance to an interior explosive blast will be negligible.

(iv) A full containment makeup room may be located anywhere and must meet the following requirements:

(A) The makeup room must be constructed in accordance with a licensed explosive engineer's approved design.

(B) The total amount of explosives in the room at any time must not exceed the design limit of the room.

(C) The makeup room cannot be used for storage.

NEW SECTION

WAC 296-52-807 Avalanche control blasting. (1) The employer shall ensure that all members of avalanche control blasting crews are competent ski mountaineers in good physical and mental condition.

(2) Each avalanche control blasting crew or team shall consist of a qualified and licensed blaster and at least one trained assistant.

(3) Untrained personnel may accompany blasting crews for training purposes but shall not participate in actual firing of

charges until trained and authorized.

(4) The blaster in charge of each crew or team shall be responsible for all phases of preparation and placement of charges.

(5) Avalanche control blasting should be conducted during daylight hours whenever possible.

(6) Escape route.

(a) The avalanche control crew or team shall preplan the escape route before igniting any charge.

(b) The escape route shall be as safe and foolproof as possible and shall culminate behind a terrain barrier or at least one hundred feet from the blast site by the time of detonation.

(7) Hand-thrown charges.

(a) A blaster shall only work with one charge at a time.

(b) Before attaching the igniter, the blaster must:

(i) Be at the start of the escape route;

(ii) Check the runout zone for personnel;

(iii) Check the blast area for personnel.

(c) After the blaster attaches and activates the igniter:

(i) The blaster shall check to see that the fuse is ignited;

(ii) If the fuse did not ignite, no attempt shall be made to relight it. The blaster shall immediately remove the fuse cap from the charge to sidearm it. The fuse cap shall be treated as a misfire and be put in an appropriately safe place separate from all other explosive components. It shall not be approached for at least thirty minutes, after which time it shall be properly disposed of;

(iii) The practice of double fusing hand charges shall be allowed. An attempt shall be made to light both fuses. If only one of the two fuses lights, the charge shall be deployed as normal;

(iv) As soon as the fuse is ignited, the blaster shall promptly throw the charge into the target area;

(v) All personnel shall be in a safe place when the charge detonates.

(d) Where hand-thrown charges will slide down the hill on hard frozen snow or ice surface, charges shall be belayed with light cord.

(8) Hand charges thrown from ski lifts or trams.

(a) The number of charges thrown from ski lifts or trams shall be kept to a minimum.

(b) The lift operating crew shall be informed of the blasting plans.

(c) The lift crew shall stand by for emergency procedures such as transfer of lift onto auxiliary power, evacuation, etc.

(d) The lift crew and the blaster in charge shall be in direct radio contact at all times during the blasting

operations.

(e) Only the avalanche control blasting crew and the essential lift operating personnel shall be on a lift or tram during blasting operations.

(f) The avalanche control blasting crew shall be traveling up slope when a charge is thrown.

(g) A charge shall always be thrown down slope and to the side, away from towers, haulropes and other equipment or facilities.

(h) The minimum distance from the blast target to the closest point of the lift shall be sixty feet.

(i) Hand charges shall not exceed 4.5 pounds of TNT equivalent.

(j) Fuses shall be timed and cut to such length that all personnel on the lift will have moved a minimum of three hundred feet from the blast target by the time of detonation.

(k) Precautions shall be taken to avoid tossing charges into any of the lift equipment, moving chairs, cables, towers, etc.

(9) Aerial avalanche control blasting.

(a) Blasting from aircraft shall require a written program approved by the Federal Aviation Administration and the director, or designee of the department of labor and industries.

(b) A written program shall include the following:

(i) Written procedures to be followed including provisions for safety in the avalanche runout zone and emergency rescue plans.

(ii) Hand charge makeup and handling procedures.

(iii) The type of explosives to be used.

(iv) The qualifications of all avalanche control personnel involved in aerial blasting must meet the requirements of WAC 296-52-64030.

(v) The specific locations where aircraft blasting is to take place.

(c) An aerial avalanche control team shall be established consisting of (at minimum) a pilot, a blaster in charge and an observer/controller.

(d) Blasting from an aircraft shall require the blaster in charge to be a licensed avalanche blaster with an endorsement for aerial blasting. The blaster in charge will be on board during each aerial blasting mission.

Note: Blasting from aircraft should only be used when it is determined that conventional methods are not the safest means to mitigate the existing avalanche hazard.

(10) Avalauncher requirements.

(a) Management shall develop a written training program and ensure that every person who will be authorized to work on an avalauncher firing team is thoroughly trained. Training shall include:

(i) All operating instructions;

(ii) Safety precautions;

(iii) Emergency procedures;

(iv) Securing requirements for the equipment.

(b) Each employer shall have a list of authorized operators listed on a posted operator's list.

(c) Only trained and authorized personnel shall be permitted to point and fire an avalauncher with explosive rounds.

(d) During firing of explosive loaded rounds, the firing team shall consist of two qualified operators and not more than one adequately trained helper.

(e) Operators must have a current state blasting license.

(f) Each operator shall individually check the elevation, pointing and pressure settings of the gun before each shot is fired.

(g) Operators shall attempt to determine and record whether or not each round which is fired actually explodes on contact.

(h) The approximate location of all known misfired explosives (or duds) shall be recorded.

(i) Initial shooting coordinates for each avalauncher mount shall be made during periods of good visibility.

(j) Testing shall include test firing in various wind conditions.

(k) The correct coordinates for the various conditions encountered shall be carefully recorded.

(l) When spotter personnel are used in the target area, shooting shall be conducted with nonexplosive projectiles.

(m) Firing of explosive avalauncher rounds shall only be conducted when personnel are not in the target area.

(n) The avalauncher apparatus shall be stored in a nonfunctional condition when not in use. This shall be accomplished by:

(i) Locking out the firing mechanism or gas source in accordance with the lockout requirements of this chapter; or

(ii) Disassembly of functional components rendering the gun inoperable and separate storage of components removed; or

(iii) Removal of the entire gun to secure storage.

(o) With established avalauncher mounts, each autumn when reinstalling guns, the following procedures shall be accomplished before the gun is considered operable:

(i) All components shall be carefully inspected by qualified personnel;

(ii) After assembly and installation, the gun shall first be test fired using a nonexplosive projectile;

(iii) The established firing coordinates shall be checked by test firing.

(11) Cornice control requirements.

(a) Cornice buildup hazards shall be evaluated regularly by qualified personnel, particularly after heavy snowfall periods

which are accompanied by high wind or other snow transport weather conditions.

(b) Cornice hazards shall be controlled whenever the buildup appears to offer potential hazard to areas accessible by personnel.

(c) The control team shall establish the tension breakline of the cornice roof as accurately as conditions permit before starting any other control work on the cornice.

(d) The tension breakline shall be marked when necessary.

(e) Small lightly packed cornices may be kicked off with a ski, ski pole, or shovel by an unbelayed control team member if the ridgeline can be clearly established and all work can be done from the safe side of the ridgeline.

(f) When working along an anticipated cornice breakline, control team members shall retreat back from the breakline to change work positions rather than traverse along the breakline.

(g) The following factors shall be given careful consideration before commencing control activities on any relatively larger cornice:

(i) The older and larger a cornice becomes, the more densely it compacts. Densely packed cornices release into larger blocks offering a higher level of danger to an extended runout zone. The control team leader shall therefore take highest level of precautions to assure that the runout zone is clear of personnel;

(ii) Larger size cornices result in increased suspended weight and leverage which may cause the breakline release fracture to occur behind the actual ridgeline. The actual ridgeline may also be obscured by the simple mass of larger cornices. Control team members shall stay off the cornice roof and must be protected by a secure belay when working near the suspected breakline;

(iii) All large cornices shall be released by explosives. Explosives shall be transported, made up and fired in accordance with the following requirements:

(A) The ignition system for single hand charge blasts shall be safety fuse and cap or a system approved by the department.

(B) Detonating cord or shock tube shall be used to connect multiple charge blasts.

(C) When detonating cord is used, one end shall be securely anchored where premature cornice collapse will not disturb the anchor. The fuse and cap shall be attached to the free end of the detonating cord after all charges are connected to the detonating cord.

(D) Safety fuse length shall be sufficient to permit adequate escapement time for all personnel from the area influenced by the blast. Safety fuse shall be not less than three feet long, approximately two minutes and twenty seconds, in all instances.

(h) Cornice control work on large cornices shall be conducted during daylight hours and preferably during favorable weather conditions. As a minimum, clear visibility shall exist across the full length of any cornice which the control team is attempting to release.

(12) Belaying practices.

(a) Belay rope shall be standard 11 mm mountaineering rope or the equivalent.

(i) Belay rope shall be inspected at not less than thirty-day intervals and maintained in excellent condition.

(ii) Defective belay rope shall not be used for belaying purposes.

(b) Adequate trees or other suitable natural belay anchors shall be used in preference to a human belay anchor when such natural anchors are available.

(c) The belay anchor position shall be as near to ninety degrees from the tension breakline as the terrain conditions will permit.

(d) With either a natural belay anchor or human belay anchor, the belay line shall be tended to keep slack out of the line.

(e) When either the belayed person or belay anchor needs to change position, the belayed person shall retreat back from the cornice to a safe position until the belay anchor is reestablished.

(f) When a human belay anchor is used:

(i) The belay anchor person shall establish the anchor position as far back away from the cornice as conditions permit;

(ii) The anchor person shall remain in a seated position with their legs pointed toward the belayed person until such time as the belayed person has retreated back from the cornice to a position considered to be safe.

NEW SECTION

WAC 296-52-809 Retrieving misfired explosives (duds). (1) The following requirements shall apply to all kinds of avalanche control blasting:

(a) Each person who ignites a charge or propels a charged projectile with any kind of apparatus shall note whether or not the charge actually detonates.

(b) A conscientious effort shall be made to promptly retrieve any misfired explosives.

(i) If conditions make it impractical or dangerous to promptly retrieve a misfired explosive, a search shall be

conducted as soon as conditions permit.

(ii) Any area which contains a misfired explosive shall be closed to entry to all personnel except the search team until such time as the area has been searched and pronounced safe by the designated search leader.

(c) When searching for a misfired explosive on an uncontrolled avalanche slope (a slope which has not released), the procedures used shall be consistent with good mountaineering practices.

(d) A hand charge misfire shall not be approached for at least thirty minutes.

(e) A hand charge or avalauncher misfired explosive may be blown up with a secondary charge where they are found or may be disarmed at that location by fully trained and qualified personnel.

(f) Military warhead misfired explosives shall not be moved. They shall be blown up where they are found by secondary charges except that trained military personnel may disarm and transport such misfired explosives when approved by the governmental branch having jurisdiction.

(2) Records.

(a) Accurate records shall be maintained for every explosive device which does not detonate.

(b) Misfired explosives records shall include the following information:

(i) The suspected location;

(ii) A description of the misfired explosive;

(iii) The date the misfired explosive was lost;

(iv) The date the misfired explosive was found and disposed of.

(3) Misfired explosive frequency.

(a) Misfired explosive frequency should be maintained below one misfired explosive for every five hundred detonating attempts.

(b) All employers who do not maintain a misfired explosive frequency below one misfired explosive per five hundred detonation attempts shall investigate all aspects of the blasting program and take prompt corrective actions as indicated.

(4) Misfired explosives warning signs.

(a) Requirements for warning signs. Ski area operations which use any form of explosive device for avalanche control shall display warning, information placards and/or signs as found in this chapter, Part H.

(b) Signs shall be posted at readily visible locations and in such a manner as to give both employees and the public ample opportunity to be informed of the potential existence of misfired explosive avalanche charges. Locations may include but are not limited to:

(i) Ticket sales and lift loading areas;
(ii) Food and beverage service facilities;
(iii) Restrooms and locker rooms;
(iv) Safety bulletin boards;
(v) Along general access routes.

(c) Signs shall be distinctive in appearance from the surrounding background where they are posted.

(d) Signs shall be maintained in legible condition.

(e) Signs shall include the following information:

(i) The word "WARNING" or "DANGER" at the top of the sign in the largest lettering on the sign;

(ii) The words "EXPLOSIVES ON THE MOUNTAIN";

(iii) A colored pictorial illustration which also provides information on dimensions of each type of explosive device used in the area;

(iv) The sign wording shall conclude with specific instructions to be followed by anyone who locates an unexploded explosive device.

REPEALER

The following section of the Washington Administrative Code is repealed:

WAC 296-52-66055	Transfer or lease of a magazine or mobile storage site.

AMENDATORY SECTION (Amending WSR 01-11-038, filed 5/9/01, effective 9/1/01)

WAC 296-59-005 Incorporation of other standards. (1) Lifts and tows shall be designed, installed, operated, and maintained in accordance with American National Standard Institute (ANSI) B77.1-1982, Standards for Passenger Tramways--Aerial Tramways and Lifts, Surface Lifts, and Tows--Safety Requirements.

(2) Future revised editions of ANSI B77.1-1982 may be used for new installations or major modifications of existing installations, as recommended or approved by the equipment manufacturer or a qualified design engineer, except that, where specific provisions exist, variances shall be requested from the department.

(3) ((~~Commercial explosives shall be transported, stored, and used in compliance with chapter 296-52 WAC, Safety standards for the possession and handling of explosives, and chapter 70.74 RCW, Washington State Explosives Act, except that avalanche control blasting shall comply with the special provisions of this chapter.~~)) Reserved.

(4) The use of military type weapons for avalanche control shall comply with all requirements of the United States government and/or the military branch having jurisdiction. Compliance shall include qualification of employees, security requirements, and storage and handling of ammunition.

(5) The employer shall develop and maintain a chemical hazard communication program as required by WAC 296-800-170, which will provide information to all employees relative to hazardous chemicals or substances to which they are exposed, or may become exposed, in the course of their employment.

(6) When employees perform activities such as construction work or logging, the WAC chapter governing the specific activity shall apply, e.g., chapter 296-155 or 296-54 WAC, et seq.

AMENDATORY SECTION (Amending Order 88-11, filed 7/6/88)

WAC 296-59-007 Definitions. ((~~(1)~~)) "Act" means the Washington Industrial Safety and Health Act of 1973, RCW 49.17.010 et seq.

((~~(2)~~)) "Aerial work platform" means any form of work

platform, work chair, or workbasket designed to lift or carry workmen to an elevated work position.

((~~(3)~~)) "ANSI" means the American National Standards Institute.

((~~(4)~~)) "Approved" means approved by the director of the department of labor and industries except where this code requires approval by another specific body or jurisdiction authority.

((~~(5)~~)) "ASME" means the American Society of Mechanical Engineers.

((~~(6) "Attended," as attending explosives, means the physical presence of an authorized person within the field of vision of explosives. The said attendant shall be awake, alert, and not engaged in activities which may divert their attention so that in case of an emergency the attendant can get to the explosives quickly and without interference, except for brief periods of necessary absence, during which absence simple theft of explosives is not ordinarily possible.~~

~~(7)~~)) "Authorized person" means a person approved or assigned by the employer to perform specific duties or to be at specific restricted locations.

((~~(8)~~)) "Avalanche" means the sliding or falling of a large amount of snow down a steep slope which has a destructive force due to its mass.

((~~(9) "Avalanche control pack" means a specially designed and constructed pack for carrying explosives.~~

~~(10) "Avalanche control route" means a route or specific path which is used by authorized persons in order to control the occurrence of avalanches.~~

~~(11) "Avalancher" means a device like a cannon which is used for avalanche control blasting. It has a rotating base calibrated for pointing and the barrel is mounted on an elevating mechanism. It uses a compressed gas to propel a projectile containing an explosive charge and detonating means. The gas source is connected to the gun by high pressure hose with in-line control valves and pressure gauges ahead of the trigger mechanism.~~

~~(12)~~)) "Belay" means to provide an anchor for a safety line when a person is working in a position exposed to falling or sliding, the mountaineering term.

((~~(13) "Blaster's license" means an individual license issued by the department under the provisions of chapter 296-52 WAC.~~

~~(14) "Blasting cap" or "cap" when used in connection with the subject of explosives shall mean detonator.~~

~~(15) "Buildings that are not inhabited" means a building(s) which has no one in it while explosives are being made up in an adjacent explosives makeup room or while explosives are being held in an adjacent day box or hand charge storage facility.~~

~~(16)~~)) "Designated" means appointed or authorized by the highest management authority available at the site.

((~~(17)~~)) "Department" means the department of labor and industries, division of industrial safety and health, unless the context clearly indicates otherwise.

((~~(18)~~)) "Director" means the director of the department of labor and industries or his/her designated representative.

((~~(19) "Dud" or "misfire" means an explosive charge with a detonating means which does not explode when detonation is attempted.~~

~~(20) "Fuse igniter" means a special pyrotechnic device intended to be used to ignite safety fuses.~~

~~(21) "Handcharge" means an explosive charge with a cap and fuse assembly inserted in place.~~

~~(22)~~)) "Hazard" means that condition, potential or inherent, which might cause injury, death, or occupational disease.

((~~(23)~~)) "Lift certificate to operate" means an operating certificate issued by the Washington state parks and recreation commission pursuant to chapter 70.88 RCW subsequent to annual inspections as required by chapter 352-44 WAC.

((~~(24)~~)) "N.E.C." means the National Electric Code, as published by either the National Fire Protection Association or ANSI.

((~~(25)~~)) "Occupied building" means a building regularly occupied in whole or in part as a habitation for human beings, or any church, schoolhouse, railroad station, store, or other building where people are accustomed to assemble.

((~~(26)~~)) "Qualified" means one who, by possession of a recognized degree, certificate, license, or professional standing, has successfully demonstrated the personal ability to solve or resolve problems relating to the subject matter, the work, or the project.

((~~(27)~~)) "RCW" means the Revised Code of Washington, legislative law.

((~~(28)~~)) "ROPS" means rollover protective structure.

((~~(29)~~)) "S.A.E." means the society of automotive engineers.

((~~(30)~~)) "Safety factor" means the ratio of ultimate breaking strength of any member or piece of material or equipment to the actual working stress or safe load when in use.

((~~(31)~~)) "Shall" indicates a mandatory requirement.

((~~(32)~~)) "Should" indicates a recommended practice.

((~~(33)~~)) "WAC" means the Washington Administrative Code.

((~~(34)~~)) "WISHA" means Washington industrial safety and health administration.

AMENDATORY SECTION (Amending Order 88-11, filed 7/6/88)

WAC 296-59-015 General requirements. (1) The use of any machinery, tool, material, or equipment which is not in compliance with any applicable requirement of this chapter is prohibited. Such machine, tool, material, or equipment shall either be identified as unsafe by tagging or locking the controls to render them inoperable or shall be physically removed from its place of operation.

(2) The employer shall permit only those employees qualified by training or experience to operate equipment and machinery.

(3) Employees shall use safeguards provided for their protection.

(4) Loose or ragged clothing, scarfs, or ties shall not be worn while working around moving machinery.

(5) Workers should not be assigned or permitted to occupy work locations directly under other workers. When such practice is unavoidable, all parties shall be made aware of the potential hazard and adequate protective measures shall be taken. When adequate protective measures are not available, one party shall be moved to eliminate the potential exposure.

(6) Employees shall report to their employers the existence of any unsafe equipment or method, or any other hazard which, to their knowledge, is unsafe. Where such unsafe equipment or method or other hazard exists in violation of this chapter it shall be corrected.

(7) Housekeeping.

(a) All places of employment shall be kept clean to the extent that the nature of the work allows.

(b) The floor of every workroom shall be maintained so far as practicable in a dry condition. Where wet processes are used, drainage shall be maintained. Where necessary or appropriate, waterproof footgear shall be worn.

(c) To facilitate cleaning, every floor, working place, and passageway shall be kept free from protruding nails, splinters, loose boards, unnecessary holes and openings or other tripping hazards.

(d) Cleaning and sweeping shall be done in such a manner as to minimize the contamination of the air with dust and so far as is practical, shall be done outside of working hours.

(8) Requirements for warning signs. Ski area operations which use any form of explosive device for avalanche control shall display warning, information placards and/or signs as

found in chapter 296-52 WAC, Part G.

REPEALER

The following sections of the Washington Administrative Code are repealed:

WAC 296-59-100	Avalanche control.
WAC 296-59-102	Acceptable warning signs for typical avalanche control explosive device(s) duds.
WAC 296-59-103	Storage, makeup, and use of explosives for avalanche control blasting.
WAC 296-59-105	Handcharge makeup methods.
WAC 296-59-107	Avalanche control blasting.
WAC 296-59-109	Retrieving misfires or duds.